

Release Notes

HP StorageWorks Command Console V2.5

Product Version: 2.5

Third Edition (March 2005)

Part Number: AA-RV1TA-TE

These Release Notes contain last-minute and supplemental information for the HP StorageWorks Command Console by HP V2.5 Storage Management Software.

For the latest version of these Release Notes and other Command Console documentation, access the HP storage web site at <http://h18006.www1.hp.com/storage/index.html>.



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Document Catalog

To view and access product documentation included with your HP StorageWorks Solution Software CD, open the `MANUALS.PDF` file from the root directory. This file serves as a catalog and provides links to all manuals and documents included on your CD. Release Notes (such as the document you are now reading) are not included on the CD. This is by design and allows for last minute changes that become available after documents go to press.

Note: To view Portable Document Format (PDF) files you need Adobe Acrobat Reader. If you do not have this program installed, you can install it from the *ACROBAT* folder on your CD.

Introduction

The StorageWorks Command Console (SWCC) provides a graphical user interface that can be used to configure and monitor your storage subsystem. Use of SWCC is highly recommended. Refer to the *HP StorageWorks Command Console V2.5 User Guide* for information about installing and using SWCC.

The SWCC Agent is compiled for each operating system it supports, and is installed on the host system. The SWCC Client is installed on a Windows Client within the enterprise.

Identifying Your SWCC Software Revision Level

The SWCC User Guide is identified as V2.5, which refers to the entire software suite revision. The SWCC Client software suite included in this release of the Solution Software kit consists of the following components:

- SWCC Command Console, V2.2.0
- SWCC CLI Window, V2.5.0
- HSagent, V2.5.0
- HSG80shim, V2.2.0
- HSG80ACS85 StorageWindow, V2.5.0
- HSG80 StorageWindow, V2.1.0
- HSG60 StorageWindow, V2.5.0

In the above list, the name of each executable is given with its subfolder relative to the installation folder of the SWCC Client kit.

Verification of the individual components can be done with Explorer by right-clicking on the particular executable program in its folder and selecting the Properties option. In the resulting Properties window, click on the Version tab and select the Product Version to display the version of the program.

New Features in SWCC V2.5

The following new features are available in V2.5:

- The Controller Properties Page > Connections Properties Tab now contains a delete column used for deleting connections to the controller.
- Client refresh status has been added to the lower status bar of the Client window.

Known Issues

This section presents clarifications on the behavior of the software in certain situations.

Storage Area Network (SAN) Configuration

In a SAN configuration, we recommend that only one SWCC Agent be active at one time.

Integration with SWCC and Insight Manager

Starting with Insight Manager V4.23, the HSG80 controller can be monitored and managed from Insight Manager. Insight Manager includes the HSG80 controller and its status on the Insight Manager storage display. Insight Manager can also launch the SWCC HSG80 Storage Window to manage storage connected to the HSG80 controller.

There are two Client versions, HSG80 and HSG80 ACS85. A software "shim" is included with your solution software kit and must be installed on your Client station. This "shim" provides access to both HSG80 and HSG80 ACS85 storage window from Insight Manager.

The "shim" determines which Client version to open. When the HSG80 Storage Window is opened within Insight Manager, the Storage Window that supports ACS V8.4 and earlier is launched. The Storage Window will work correctly as long as it is used with HSG80 controllers that have ACS V8.4 or earlier. When the HSG80 ACS85 Storage Window opens within Insight Manager it supports ACS V8.5 or later.

Event Logs

The event log on a Windows NT, Windows 2000, or Windows Server 2003 (32-bit) Client may have extra error message text appended.

Special Windows NT Device Driver Required for Compatibility in SCSI-2 Mode

For local SCSI and network connections, the special HSG80 device driver `HSZDISK.SYS`, must be installed and running properly to connect the Client to a host running Windows NT. The device driver makes HSG80 virtual disks visible to the host operating system and enables communication between the Client, Agent, and host file system.

Cautions When Configuring from a Configuration File

When configuring a storage subsystem from a configuration file, the program prompts you to choose whether or not the program initializes your virtual disks. You must choose the appropriate option or you risk the loss of data as the configuration file is loaded and your subsystem is configured.

- Do not initialize virtual disks—Choose this option when your virtual disks contain valuable user data, and you wish to retain that data. You might, for instance, need to replace a failed subsystem component such as a controller or cache module. In this case, your subsystem configuration must be transferred to the new hardware, but you do not wish to change any information on your storage devices themselves.
- Initialize virtual disks—Choose this option when your virtual disks do not contain user data, or when you do not care if the data on them is lost. You might use this option when configuring a storage subsystem from scratch, to make it match the configuration file.

Virtual Disk Recovery from a Configuration File

Note that when you delete a virtual disk, the disk's member drives are all re-initialized and all user data is lost. You cannot restore the virtual disk's data by configuring your subsystem from a configuration file. A configuration file contains only information about the structure of a virtual disk and does not contain the disk's data itself.

Virtual Disk Maximum Capacity

The maximum capacity of RAID-based virtual disks is determined by the capacity of the smallest member, not the largest.

- The maximum capacity of RAID 0 virtual disks is equal to the number of members times the capacity of the smallest member.

- The maximum capacity of RAID 1 virtual disks is equal to the capacity of the smallest member.
- The maximum capacity of RAID 0+1 virtual disks is equal to the number of members in one stripe times the capacity of the smallest mirrorset member.
- The maximum capacity of RAID 3/5 virtual disks is equal to the number of members minus one times the capacity of the smallest member.

Operating Constraints

This section describes the operating constraints for the software. An operating constraint is a limitation placed on the operation of the controller by the nature of its design. Keep these constraints in mind, to avoid problems and to help you to get the maximum performance from your controller.

CLI RUN Commands

Do not issue RUN commands in the CLI Window. Use only a maintenance terminal connection to issue RUN commands.

Creating Partition Units Across Targets or Ports

Be aware that the name you pick for a unit assigns it to a particular host bus target. If you create a unit from free space on a device, the program forces you to use a unit name that puts the unit on the same host target as the other partitions on the device.

On dual-port controllers, partitions on the same device that are assigned to different host ports are not supported.

Mirrored Cache Mode Not Retained After Configuration Restore

If you restore your controller configuration from a configuration file, the mirrored cache setting may not be properly enabled. You must restore the mirrored cache setting manually, using a CLI Window.

Cache Policy Not Shown in Controller Properties Sheet

The controller cache policy may not be properly shown in the controller properties sheet. The field may be blank. You must use a CLI Window to obtain the cache policy setting.

Incorrect Capacity Shown in Add Virtual Disk Wizard

In some circumstances, in Step 3 of the Add Virtual Disk Wizard, if you specify a capacity greater than the available disk capacity, an error message results. If you back up to Step 2 of the Wizard and return to Step 3, the correct capacity is then displayed. An attempt to move to Step 4 of the Wizard at this point, however, results in the same error message, even though the correct capacity is shown.

To complete your virtual disk, you must exit the Wizard and attempt to recreate the virtual disk.

False Restart Message on Agent Installation

When you first install a Windows NT, Windows 2000, or Windows Server 2003 (32-bit) Agent, and you modify more than one configuration parameter, the installation program may prompt you with a message indicating that the Agent must be "restarted," even though it has not yet been completely installed. You may ignore this message, and you must respond to the subsequent prompt, "Would you like to start the Agent service now?" by answering "Yes."

Configuration File Deleted on Reinstallation or Upgrade

Save a copy of the current `swcc2.mdb` file to another directory if you intend to reinstall or upgrade the Client. If you uninstall the program, you will delete the `swcc2.mdb` file. This file contains your configuration of host systems and storage subsystems used in the Navigation Tree.

To reinstate your current Navigation Tree configuration after installing a new version of Command Console, copy your saved `swcc2.mdb` file back to the directory to which you installed Command Console (`\Program Files\Compaq\SWCC\swcc2.mdb`).

Client Hangs If Virtual Disk Deleted

If the Client is monitoring a particular subsystem, and you delete the virtual disk being used to communicate with that subsystem, the program may hang. To delete the virtual disk that the Client is using for communications with an Agent, you must first reassign another virtual disk as the communications LUN, using the Agent configurator.

If you are using the CCL as your communications LUN, and you disable it, the Client may lose its connection with your subsystem. If you wish to disable the communication LUN, you must first reassign another virtual disk as the communications LUN.

Missing Tabs in Search Menu in Help

When you select the Search button in Command Console Help, Windows Help may not display an Index or Find Tab.

To prevent this problem, delete any hidden files with a .GID extension that are in the Command Console directory. The WinHelp engine uses .GID files to construct the Index and Find Tabs. If the files are corrupted, the engine may not display one or both of the tabs. Deleting the files causes the engine to reconstruct the .GID files.

Communications Failure on Power Up with Low Batteries

If the battery in your cache is discharged when you power up the controller, the controller may produce an invalid cache error. If you are using the Client as your controller interface at that time, the error may prevent communication with the controller. In this case, the controller status bar in the Client changes to yellow, and the program displays a window containing error information.

To clear the error, you must exit the Client and use a normal controller maintenance terminal to issue the `CLEAR ERRORS INVALID_CACHE` command before you can use the controller. See your controller documentation for instructions on use of the `CLEAR ERRORS INVALID_CACHE` command.

If the battery remains low, the invalid cache error may reappear. In this case, you can operate your controller with reduced capability, or you can change its cache policy to get around its built-in battery protection, although at some risk to your data. Refer to your controller documentation for details on its cache policy controls.

After you have cleared the invalid cache error, you can use either a normal maintenance terminal or Client as your controller interface.

Reservation Conflict

Agent will discard reserved LUNs from its list of devices to receive a status. The reservation conflict will be recorded for each reserved LUN in the system error log. A notification will appear in the log for each LUN reserved. In addition to the system's binary error log (Tru64 UNIX), an error message will also be recorded in the daemon.log file. An example of the error message is "Device lunName is reserved and cannot be statused by steamd." This only applies to Agent during its current run. If Agent is restarted without either a) releasing the reservation or b) scanning the bus, the reservation conflict will be recorded again each time Agent is restarted.

For prior Agent releases, to avoid filling the binary error log, Agent must be stopped and restarted with bus scan enabled. Agent will not record the reserved LUN in the storage.ini file, and will not status the reserved LUN.

Add Virtual Disk Wizard - Partitioned Units and Ports Functionality

The Add Virtual Disk Wizard allows you to choose a port when adding a unit based upon a partitioned set that is different from the port of a current unit that is using the same partition.

Ensure that you use a LUN ID that corresponds to units that have already been used for a partitioned storageset. For example, if a unit using a partitioned set has a LUN ID below 100 (e.g., D55), then the subsequent units should also be below 100. Likewise, if a LUN ID is 100 or above, subsequent LUN IDs should also be above 100.

LUN ID is set on Step 4 of the Add Virtual Disk Wizard.

NT Agent CCL Access Device Recognition

For ACS 8.5 and higher in SCSI-3, it is possible to have multiple CCLs based on the unit offsets. Agent picks the last of the set as the access device. The CCLs will not appear in the disk administrator, but are visible in the registry with their port, target, and LUN. The CCL will show as CCLp:b:t:l, each with a different target number (port bus target LUN, e.g., CCL2:1:1:0) in the storage.ini file.

In SCSI-2, you will only get one CCL, which is presented as an offline device in disk administrator. This CCL will show as "PhysicalDrive#" in the storage.ini file.

Selecting Disk Drives When Creating Snapshots

When creating a snapshot, if you select disk drives of different sizes, Storage Windows reports the size erroneously. Storage Window adds all selected devices together for selected capacity. The selected capacity is actually the smallest drive multiplied by the quantity of drives selected. Storage Windows will allow you to proceed when you have inadequate storage selected. When you select drives of different sizes, you should calculate the selected storage by multiplying the smallest drive by the quantity of drives selected. If you select drives of the same size, this feature functions properly.

Authorization Error when Adding the Server to the Command Console

If you receive an authorization error when you add a system to Command Console, your Client system may be missing from the Agent's list of Client system entries. If you have more than one type of Agent installed on that Agent system, the name of your Client system must be on each Agent's list of Client system entries.

Updated Firmware Requires Rescan

After you have completed a firmware update, the updated version number may not appear in the navigation tree under the device properties. To display the correct version number delete the storage.ini file and rescan the bus using scanbus.exe. This action updates the firmware version displayed in the navigation tree.

Loss Of Connection When Using SCSI To Connect To HSG

Occasionally the SWCC Client loses connection to the controller when connected over a SCSI connection. A dialog box appears to indicate the loss of connection. To reestablish the connection restart the SWCC Client.

SWCC for HP-UX and NetWare

- HP-UX—SWCC is not supported on HP-UX versions 11i V2.0 or 11i V2.0 Update 2.
- NetWare—SWCC is no longer available on HBA 281540-B21 (3R-A3750-AA) with the HSG80 Modular Storage RAID Array Solution Software Kit V8.8. Refer to Chapter 4 of the *HSG80 ACS Solution Software V8.8 for Novell NetWare Installation and Configuration Guide* for replacement options.

Sun Solaris Error Messages

With Version V8.8 of ACS, error messages may be seen in the Solaris Messages file on occasion. These messages are informational only and do not require action. Below are some example messages:

```
Jun 23 15:54:10 mvq252 scsi: [ID 107833 kern.warning] WARNING:
/swsp@0,2/sd@0,0 (sd345):

Jun 23 15:54:10 mvq252      Error for Command: <undecoded cmd
0x1c>      Error Level: Informational

Jun 23 15:54:10 mvq252 scsi: [ID 107833 kern.notice]
Requested
Block: 0      Error Block: 0

Jun 23 15:54:10 mvq252 scsi: [ID 107833 kern.notice]
Vendor: DEC
Serial Number: ZG80200260

Jun 23 15:54:10 mvq252 scsi: [ID 107833 kern.notice]
Sense Key:
Illegal Request

Jun 23 15:54:10 mvq252 scsi: [ID 107833 kern.notice]      ASC:
0x24
(invalid field in cdb), ASCQ: 0x0, FRU: 0x0
```

The SWCC `steamd` Agent for SUN does NOT utilize the CCL, therefore it is a best practice to set up the SWCC `steamd` to target the least active device LUN that is presented to the host.

These messages are informational and may be disregarded when they depict the Sense Key:

- Illegal Request
- ASC: 0x24 (invalid field in `cdb`)
- ASCQ: 0x0
- FRU: 0x0

These messages occur when the SWCC Agent is attempting to communicate for a status from the HSG array controller at the same time that I/O is active to the unit. By identifying the least active LUN that is presented to the host (and the LUN should not be part of a partitioned HSG storage container), the presence of this event will be minimized in the messages file. Currently the SWCC `steamd` Agent in V2.5 does not support utilizing the CCL device of the HSG array controller.